

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REQUEST FOR ACCESS TO AN APPLICATION UNDER 37 CFR 1.14(e)

RECEIVED
DEC 18 2002
File Information Unit

In re Application of	
Application Number <u>07-715272</u>	Filed <u>06-14-91</u>
Art Unit	Examiner

Paper No. #37

Assistant Commissioner for Patents
Washington, DC 20231

1. ☒ I hereby request access under 37 CFR 1.14(e)(2) to the application file record of the above-identified ABANDONED Application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and is: (CHECK ONE)

☒ (A) referred to in:

United States Patent Application Publication No. _____, page _____, line _____,

United States Patent Number 6407213, column _____, line _____, or

an International Application which was filed on or after November 29, 2000 and which

designates the United States, WIPO Pub. No. _____, page _____, line _____.

☐ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11(b) or

1.14(e)(2)(i), i.e., Application No. _____, paper No. _____, page _____, line _____.

2. ☐ I hereby request access under 37 CFR 1.14(e)(1) to an application in which the applicant has filed an authorization to lay open the complete application to the public.

Shoaib Ghayour
Signature

12-18-02
Date

Shoaib Ghayour
Typed or printed name

RECEIVED FOR PTO USE ONLY	
Approved by <u>DEC 18 2002</u> (initials)	<u>784</u>
Unit:	File Information Unit

(12) **United States Patent**
Carter et al.

(10) Patent No.: **US 6,407,213 B1**
(45) Date of Patent: **Jun. 18, 2002**

(54) **METHOD FOR MAKING HUMANIZED ANTIBODIES**

(75) Inventors: **Paul J. Carter; Leonard G. Presta,**
both of San Francisco, CA (US)

(73) Assignee: **Genentech, Inc.,** South San Francisco,
CA (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **08/146,206**

(22) PCT Filed: **Jun. 15, 1992**

(86) PCT No.: **PCT/US92/05126**

§ 371 (c)(1),

(2), (4) Date: **Nov. 17, 1993**

Related U.S. Application Data

(63) Continuation-in-part of application No. 07/715,272, filed on
Jun. 14, 1991, now abandoned.

(51) Int. Cl.⁷ **C07K 16/00**

(52) U.S. Cl. **530/387.3**; 435/69.6; 435/69.7;
435/70.21; 435/91; 536/23.53; 424/133.1

(58) Field of Search 435/69.6, 69.7,
435/70.21, 91, 172.2, 240.1, 240.27, 252.3,
320.1, 328; 536/23.53; 424/133.1; 530/387.3

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,816,567 A	3/1989	Cabilly et al.	
4,845,198 A	7/1989	Urdal et al.	530/388.22
5,132,405 A	7/1992	Huston et al.	530/387.3
5,225,539 A	7/1993	Winter	530/389.3
5,530,101 A	6/1996	Queen et al.	530/387.3
5,558,864 A	9/1996	Bendig et al.	424/133.1
5,585,089 A	12/1996	Queen et al.	424/133.1
5,677,171 A	10/1997	Hudziak et al.	435/7.23
5,693,762 A *	12/1997	Queen et al.	530/387.2
5,714,350 A	2/1998	Co et al.	435/69.6
5,772,997 A	6/1998	Hudziak et al.	424/130.1
5,821,337 A	10/1998	Carter et al.	530/387.3
5,834,598 A	11/1998	Lowman et al.	530/399
5,859,205 A	1/1999	Adair et al.	530/387.3

FOREIGN PATENT DOCUMENTS

AU	85058/91	3/1992 C07K/15/12
EP	120694	10/1984	
EP	125023 A1	11/1984	
EP	0 239 400 *	9/1987 C12N/15/00
EP	323806 A1	7/1989	
EP	328404 A1	8/1989 A61K/39/395
EP	338745 A1	10/1989	
EP	365209 A2	4/1990	
EP	365997 A2	5/1990	
EP	368684	5/1990	
EP	403156 A1	12/1990	
EP	438310 A2	7/1991	
EP	438312 A2	7/1991	
EP	440351 A2	8/1991	
EP	0 460 167 B1	12/1991	
EP	0 519 596 A1	12/1992	

EP	0 592 106 A1	4/1994	
EP	0 620 276	10/1994	
EP	682040 A1	11/1995	
EP	451216 B1	1/1996 C12P/21/08
EP	432249 B1	9/1996	
GB	2 188941	10/1987	
WO	WO 87/02671	5/1987	
WO	WO 88/09344	12/1988	
WO	WO 89/01783	3/1989	
WO	WO 89/06692	7/1989	
WO	WO 89/09622	10/1989	
WO	WO 90/07861	7/1990	
WO	90/07861 *	7/1990 C12P/21/00
WO	WO 91/07492	5/1991	
WO	WO 91/07500	5/1991	
WO	WO 91/09966	7/1991 C12P/21/08
WO	WO 91/09968	7/1991 C12P/21/08
WO	WO 91/09967	11/1991	
WO	WO 92/01047	1/1992	
WO	WO 92/04380	3/1992	
WO	WO 92/04381	3/1992	
WO	WO 92/05274	4/1992	
WO	WO 92/11383	7/1992	
WO	WO 92/11018	9/1992 A61K/35/14
WO	WO 92/15683	9/1992	
WO	WO 92/16562	10/1992	
WO	WO 92/22653	12/1992	
WO	WO 93/02191	2/1993	
WO	94/11509	5/1994	
WO	WO 94/12214	6/1994	

OTHER PUBLICATIONS

Riechmann et al. [Nature 332:323-327 (1988)].*

Queen et al. [Proc. Natl. Acad. Sci. 86:10029-10033 (1989)].*

Roitt [Immunology, published 1985, by Gower Medical Publishing Ltd. (London, England) p. 5.5].*

Tramontano et al. [J. Mol. Biol. 215:175-182 (1990)].*

"Biosym Technologies" in New Products, Chemical Design Automation 3 (Dec. 1988).

"Polygen Corporation" in New Products, Chemical Design Automation 3 (Nov. 1988).

Adair et al., "Humanization of the murine anti-human CD3 monoclonal antibody OKT3" *Hum. Antibod. Hybridomas* 5:41-47 (1994).

Chothia et al., "Principles of protein-protein recognition" *Nature* 256:705-708 (1975).

Chothia et al., "Transmission of conformational change in insulin" *Nature* 302:500-505 (1983).

Corti et al., "Idiotope Determining Regions of a Mouse Monoclonal Antibody and Its Humanized Versions" *J. Mol. Biol.* 235:53-60 (1994).

(List continued on next page.)

Primary Examiner—Anthony C. Caputa
Assistant Examiner—Minh-Tam Davis
(74) Attorney, Agent, or Firm—Wendy M. Lee

(57) **ABSTRACT**

Variant immunoglobulins, particularly humanized antibody polypeptides are provided, along with methods for their preparation and use. Consensus immunoglobulin sequences and structural models are also provided.

82 Claims, 9 Drawing Sheets